CHAPTER VI—AGRICULTURE, FOREST, CO-OPERATION AND MARKETING.

(i) Weather and Crop Condition

573. Normal total rainfall during the year (April 1959 to March 1960) for the State was 1189.8 m. m. While the average actual rainfall for the State was 1477.4 m.m. Excessive rainfall was registered, during this period in most parts of the State. In Bangalore, Kolar Tumkur and Bijapur Districts rainfall was in slight deficit while in Mandya, Chitaldrug, Bellary, Raichur, Gulbarga and Dharwar Districts, rainfall was in slight excess over the normal rainfall. In other Districts of the State an excessive rainfall over the normal was registered. In Coorg, South Kanara, North Kanara and in Chickmagalur Districts. Annual district-wise mean rainfall registered respectively were 3861.6 m.m. 5073.9 m.m. 3587.2 m.m. and 2649.5 m.m. While the normal rainfall for these districts were respectively 2702.7 m.m. 3870.8 m.m. 2714.3 m.m. and 1890.7 m.m. South Kanara District registered the highest annual districtwise mean rainfall for the State with 5073.9 m. m. whereas Bijapur registered the lowest annual district-wise mean rainfall with 504.5 m.m.

574. Practically there was no rainfall in any of the Districts of the State upto the month of April 1959 and there was rainfall, to some extent, during April, 1959-May 1959. However, rainfall was excessive in almost all the parts of the State during the month of June 1959 on the whole, it may be said that the rainfall was normal and was well distributed over the whole State. General feature of rainfall was that towards the end of September 1959 a few places in the State received rain.

575. Hemavathi, Tungabhadra and Malaprabha Rivers were in floods during June-July period and certain cases of damages done to crops were also reported. Floods due to heavy rains in North Kanara District, during July 1959, was also reported. Harihar Taluk of Chitaldrug District was also affected, to a certain extent, by the floods

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of Tungabhadra which occured during the period from 24th July 1959 to 26th July 1959. Anyhow, no loss either to life or property was reported from these flood stricken areas.

576. Regarding the general conditions of the Crops, the Sowing and Transplantation of important crops like paddy, jowar, sugarcane, ragi etc., were undertaken at proper times though in some cases this process was held up for want of timely rains. Standing crops were normal inspite of reported cases of attacks by pests and diseases. Some crops like paddy, cotton, jowar, sugarcane were also affected due to untimely rains. Reported that paddy was affected by pests late in June, 1959, in Bangalore District. In June, 1959 as the rainfall was heavy and was in excess over the normal rainfall, from Bangalore District it was reported that about 50 per cent of potatoe crops was destroyed. In Coorg Distict also, due to heavy rains, during the month of August 1959, ragi and cordamom crops were affected. During the month of May, 1959, crops situated near Nallies of Bhatkal Petha were damaged due to the on rush of salt water in the fields and also due to heavy rains. During the month of June, 1959 chillies plants and late sown paddy crops were damaged in Hirekerur Taluk of Dharwar District due to excessive Rains. But for these, in Bangalore, Kolar, Tumkur, Mysore and Mandya, the standing crops were very good during June, 1959, while in other Districts it was fair. Under the review period. Sugarcane in Mandya was good and the crusing of surgarcane was in good progress. A very few cases of attacks on sugarcan were reported. In Bangalore Division during the early stages, crops were withering for want of adequate rains. Rabi, jowar was affected by 'Honi' disease in Hiriyur Village of Chitradurg District during June, 1959.

577. Water supply was Sufficient in almost all the Taluks of the State except for a few of the cases. Fodder was also available to the cattle, general health of which, during the year was quite satisfactory.

	District	No. of rain-gange Station exclud-ing I. M. D. obsy Stations)	Normal Rainfall	Actual Averag Rainfall	Departure from Normal
1	Bangalore ...	30	777·3	764·8	— 22·5
2	Kolar ...	37	720·9	681·1	— 39·8
3	Tumur ...	46	668·7	631 9	— 36 8
4	Mysore ...	33	757 5	941 6	+ 184·1
5	Mandya ...	18	697·9	701·2	+ 13 3
6	Hassan ...	27	1015 2	1297.2	+ 282·0
7	Shimoga ...	28	1461·0	2209·3	+ 748·3
8	Chickmagalur ...	24	1890·7	2649 5	+ 758·8
9	Chitaldrug ...	25	568·8	577·5	+ 10·7
10	Bellary ...	12	571 7	575 3	+ 3 6
11	Bidar ...	3	857·0	1058 0	+ 201·0
12	Gulburga ...	9	717·7	789.5	+ 70·8
13	Rrichur ...	13	578·3	524 9	— 54·4
14	South Kannra	6	3870·8	5073·9	+ 1203·1
15	Coorg ...	21	2702·7	3861·6	+ 1159·9
16	Dharwar ...	16	684·4	732·4	+ 48·0
17	North Kanara ...	9	2714·4	3587·2	+ 872·8
18	Bijapur ...	11	569 9	504·5	— 65 4
19	Belgaum ...	9	791·7	940·4	+ 148·7
	State ...	379	1189·8	1477·4	+ 287·6

(ii) Agriculture

578. The climatic conditions were not favourable and consequently, crop yield was badly affected in some parts of the State during the year.

579. In Bangalore Division, rains were not timely and properly distributed during different seasons. Due to partial failure of rains, the cultivation of dry and wet land crops was badly affected. In the Mysore Division, in Shimoga District there was heavy and prolonged rain during June and July and continued drought during growth season. In Chikmagalur District, due to heavy rains, at the time of harvest of ragi and jola, the ryots did not get the expected yields. The yield of paddy was normal while that of ragi was below normal. In Coorg District, blossom showers were favourable for all plantation crops and also for the paddy crop. Dry crops like ragi and horsegram were a failure in certain areas. In South Kanara, rainfall was fairly well distributed. In Dharwar Division due to heavy showers the seedlings of paddy crop on the river banks and on the coastal regions of North Kanara District were washed away due to heavy floods. In other parts of the Division, the seasonal conditions were rather favourable for paddy. In the Raichur Division, the rains were unfavourable although the premonsoon rains set in right in time for khariff sowings. The rains

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received late in October adversely affected the harvests of khariff and rabi crops were not satisfactory. Due to failure of crops, collection of revenue in certain parts was suspended.

General Condition.

580. Though the yields were affected to some extent, it was fairly compensated by the higher prices of commodities. Agricultural labour was available in all places except during peak periods when wages went up. There was scarcity of labour in plantation areas, as also round about urban and industrial suburbs. The prices of all commodities showed an upward trend during the year. The rise in prices by the end of the year was of the order of about 15 to 25 per cent. Even during the harvest season, there was no fall in prices. There was adequate supply of all commodities in the markets except sugar which was controlled.

581. The 44 research stations and farms (exclusive of seed farms) continued to function during the year. In addition, research work was also conducted by the four research divisions of the Department *viz.*, (1) Botany (2) Chemistry, (3) Entomology and (4) Plant Pathology.

582. The results of research work were transmitted to the Farmers through the Extension wing of the Department. The four Agricultural Divisions, *viz.*, Bangalore, Mysore, Dharwar and Raichur were each under a Regional Deputy Director of Agriculture under whom the 20 District Agricultural Officers of the State worked. The Agricultural Extension activities in the N.E.S. areas were looked after by the Agricultural Extension Officers at the block level and the non-National Extension Services by Agricultural Demonstrators at the taluk level.

583. The nine special schemes for the development of cash crops *viz.*, (1) Cashew, (2) Arecanut, (3) Cocoanut, (4) Pepper, (5) Cardamom, (6) Sugarcane, (7) Cotton, (8) Oilseeds and (9) Fruits continued to serve more effectively.

Agricultural Education.

584. There were two Agricultural Colleges, one at Hebbal and another at Dharwar. Apart from this there were five Agricultural Schools *viz.*, (1) R.K. Shala, Anekal, (2) Agricultural School, Somanahalli, (3) Agricultural School, Arbhavi, (4) Agricultural School, Kumta and

(5) Agricultural School, Devihosur. The Agricultural School, Bagalkot was converted into a Gramasevaks' Training Centre. There were five Gramasevaks' Training Centres during the year, one each at Mandya, Kudige, Dharwar, Gangawati and Bagalkot.

585. During the year, 13 officers were deputed to foreign countries for higher specialised training. The work of training farmers in improved methods of tobacco cultivation was taken up. Training was given to 24 cultivators and 58 Gramasevaks in Belgaum District. Besides, training of farmers in Bee-keeping was also in progress.

586. Construction work of the hostel buildings at Hebbal and Dharwar was also in progress during the year.

Agriculture Research Information and Statistics.

587. A number of schemes were being operated for conducting investigations relating to the cause of various pests and diseases which affect the production and to evolve uitable control measures. The Research programme of all the Farms had been reoriented in order to suit the problems facing the farmers. The major achievements during the year were the evolving of high yielding strains of paddy and ragi.

588. The Agricultural information unit and the Artist Section conducted several exhibitions and gave wide publicity to the various aspects of Agricultural Development and brought out guide books in connection with Ragi and Khariff Campaigns.

Plan Progress

589. This was the 4th year of the Second Plan. In order to meet the demands of both Research and Developmental aspects of agriculture, the number of schemes formulated during the year was 145 with a provision of Rs. 114·067 lakhs.

590. In addition to emphasis being given to Food Production Schemes, special emphasis was also given for the development of commercial crops like cotton, cashew, pepper, cardamom, sugarcane, oilseeds, cocoanut, arecanut and fruits. Comprehensive development schemes had been launched with a view to increase the production of the commercial crops in the State.

Cotton.

591. It was envisaged to increase the area under cotton to 29,50,000 acres with an estimated production of

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6,11,916 bales. However, due to adverse seasonal conditions, want of Cotton Ginning and Pressing Act, non-availability of water supply under Tungabhadra project for want of field channels, the area under cotton came down to 25,50,000 acres with an yield of 4,00,000 Bales.

Cashewnut. **592.** It was aimed at bringing in an additional area of 20,000 acres under cashewnut cultivation. But the area actually brought under cashewnut was 15,092 acres. An amount of Rs. 1,27,095 was disbursed to growers as loan, both in cash and kind.

Pepper **593.** An area of about 1,138 acres was brought under pepper cultivation during the year. Four nurseries were established for the purpose of producing rooted cuttings and 1,24,000 cuttings were distributed to growers. A sum of Rs. 13,920 was granted as loans to farmers.

Cardamom **594.** An additional area of 500 acres was brought under Cardamom cultivation. Five nurseries were maintained with the aim of producing one lakh seedlings in each. Out of Rs. 50,000 provided for loans, only 15,000 was utilised by the nurseries.

Sugarcane **595.** The targetted achievement of increasing the yield to 27 tons per acre was reached.

Oilseeds **596.** During the year, the total production of oilseeds was 6,30,000 tons as against the target of 6,23,270 tons *i.e.*, an additional production of 1,13,110 tons was achieved during the year.

Arecanut **597.** An additional area of 600 acres was brought under arecanut during the year and 5,50,000 quality seedlings were distributed during the year.

Cocoanut **598.** The target for the distribution of 67,605 seedlings was reached, thus bringing the total number of seedlings distributed to 1,74,898 upto end of the year.

Fruits **599.** To promote fruit production in the State a scheme was launched during 1956. The total achievements made upto end of 1959-60 were (i) 2,200 acres under new orchards and (ii) 9,200 under rejuvenation of old orchards. A sum of Rs. 2,26,986 was advanced to farmers out of the provision of Rs. 2,52,000 made for the year. In Dharwar district, 40 acres under grapes and 56 acres under Basrai Banana were cultivated during the year.

Manures and Fertilizers.

600. In Bangalore Division both organic and artificial manures were increasingly used by the ryots as a result of departmental efforts. Preparation of compost from town-waste and night soil was taken up in all Municipalities and subsidy was granted by the Government. On account of the inadequacy of cattle manure application of green manure by growing perennial green manure plants like Glyricidia was popularised.

601. In Mysore Division, the ryots have realised the importance of chemical manures and its application was steadily increasing. Farm yard compost and green manures were extensively used.

602. In Dharwar Division, the additional production as a result of the use of fertilizers like ammonium sulphate, area, ammonium sulphate nitrate, super phosphate and manure mixture, was estimated at 8,630 tons. Application of fertilizers was advocated to the ryots as per the recommendation of the State fertilizers workshop in respect of irrigated crop and also of irrigated areas having assured rainfall of 30 inches or above.

603. As regards compost production and distribution, wide propaganda and demonstrations were carried out. A special compost week was organised in Dharwar district during October and in that period 4,242 compost pits were dug to produce 10,605 tons of compost valued at Rs 53,000. About 1,05,640 tons of rural compost and 55,742 tons of urban compost were prepared during the year.

604. In Raichur Division application of farm yard manure, and green leaf manure was generally practiced. The use of chemical fertilizers has become very popular. Especially khariff and rabi campaigns gave impetus to the use of fertilizers for the rainfed crops.

605. Japanese Method of Paddy Cultivation was very popular in all the Divisions. Large tracts of land were brought under Japanese Method of Paddy Cultivation.

Double Cropping

606. To tide over the scarcity of food, the ryots were induced to take up a second crop wherever facilities existed or that purpose. Short duration and better yield varieties were advised.

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Rice

607. The research on rice was being carried out at :—

Agricultural Research Station, Nagenahalli :— Is intended to serve the Cauvery Channel area of Mysore, Mandya and Hassan Districts. All new introductions were being successfully grown in the above areas.

608. *Agricultural Research Station, Mangalore* :— Is intended to serve the paddy-growing areas of coastal tracts of South Kanara. Under the Japanese method though the seedlings were planted late, higher yield up to 20 to 25 per cent was obtained and there was no delay in flowering in comparison with the local method of early transplanting.

609. *Agricultural Research Station, Mugad* :—Is intended to serve the drilled tracts of Malnad regions of Mysore State *i.e.*, Western parts of Dharwar and Belgaum districts, North Eastern parts of Kanara districts, parts of Shimoga and Chickmagalur districts in all to the extent of 5 lakhs of acres where the rainfall varies from 30 to 50 inches and where paddy is being grown by drilled sowing and with the aid of rainfall.

610. As a result of research work done since its inception, 11 improved strains suited to different land levels and rainfall conditions have so far been envolved.

611. *Agricultural Research Station, Sirsi* :—Is intended to serve the Malnad up-ghat areas of North Kanara where rice is grown under high elevation often in terraced fields with heavy rainfall of over 60 inches. It serves the heavy rainfall areas of about 60,000 acres spread over Sirsi, Siddapur, Yellapur and Supa taluks.

612. *Agricultural Research Station, Ponnampet, (Coorg)* :—Is intended to serve the hilly tracts of Malnad areas in Coorg District. Two selections one from Kiribiliya and another from Mambiliya were popular in the area.

613. *Agricultural Research Station, Kumta* :—Which is expected to serve the below ghat areas of North Kanara and cater to the needs of Karwar, Kumta, Ankola, Honnawar and Bhatkal taluks.

614. *Agricultural Research Station, Ankola* :— Is intended to serve the coastal salt land belts of North Kanara district. The breeding work was in progress during the year.

615. At the Agricultural Research Station, Hebbal, Bangalore, the work of evolving summer paddy varieties for tank fed tracts of Bangalore, Kolar and Tumkur was in progress.

Agricultural Chemistry.

616. Research was conducted on problems of Agricultural interest with a view to find out improved methods of applying fertilizers and combating crop failures.

617. The total expenditure incurred during the year on Second Plan under, (i) Development of Commercial crops and Horticulture, (ii) Agricultural Education, (iii) Research information, (iv) other Schemes and (v) Soil Conservation amounted to Rs. 72·829 lakhs as against the budget provision of Rs. 114·067.

(iii) FOREST

Forest Area.

618. The Forest area of the State was 13,572·77 (13,573.74) square miles at the end of the year. Out of this, 12,087·59 square miles were in charge of the Forest Department and 1,485·18 square miles in charge of the Revenue Department.

Protection of Forests.

619. Protection of Forests mainly consisted of prevention of smuggling of timber, sandalwood and other forest produce and of prevention of damage to teak, sandalwood and other valuable species in the forests from fire and animals.

Timber Smuggling Prevention.

620. The special mobile unit consisting of the Forest and Police staff employed in Shimoga circle detected 213 cases, of which 118 were settled departmentally leaving a balance of 95 cases at the close of the year. A sum of Rs. 61,833-51 nP was realised by way of compensation and value of timber invloved in the cases.

Spike Diseases.

621. Spike disease continued to cause heavy damage to sandal trees. Incidence of this disease was noticed during the year in certain parts of Coorg, Mysore, Hassan, Chickmagalur, Tumkur, Bangalore and Kolar Districts. Investigation about this disease is one of the main items of research at the Forest Research Laboratory, Bangalore which is now a Government of India regional Research Centre in the South.

622. Sandalwood trees affected by spike and containing heartwood were uprooted and burnt. Such of the trees as were carrying the disease but containing heartwood were